

Work Order ID 150622

Monday, August 29, 2016 2:49:18 PM

150622

Page 1

Item ID: D6103-003 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Round Billet, Aluminum
Start Date: 8/15/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 8/29/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: W Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6103	Rev B								

100

0.00

100

Purchasing

Purchasing

PURCHASING

Memo

0.00

Issue P/O: 33493 a) Description: Alluminum round billet b)
Ø3.500" x 12.500" longc) Tolerance on all dimensions are +0.030"/-0.000"

d) Material: 7075-T7351 (QQ-A-225/9) Material certification required

AUG 31 2016

DAS
13
9-89

110

0.00

110

Packaging

Packaging

Receive & Inspect for Damage & Mat'l Certs

Memo

0.03

Ensure material certification is attached

10x Sp/6-9-6

120

0.00

120

QC

Quality Control

QC6- Inspect dimensions to drawing

Memo

0.00

10 8

DAS
14
9-89

16/09/08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes - ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

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Page 2

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: MAT043	0.00				10	0		DAS 14 9-89
130									
Packaging	Memo	0.02							
Packaging	LOCATION: MAT043								16/09/08
140	QC21- Final Inspection - Work Order Release	0.00							DAS 21 9-89
140									SEP 09 2016
QC	Memo	0.17							
Quality Control									

DAS
21
9-89**SEP 09 2016**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

Monday, August 29, 2016 2:49:18 PM

Page 1

150622

D6103-003

Required Date: 8/29/2016

Required Qty: 10.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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10

Round Alum Billet

10
10x Sp/6-9-2.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

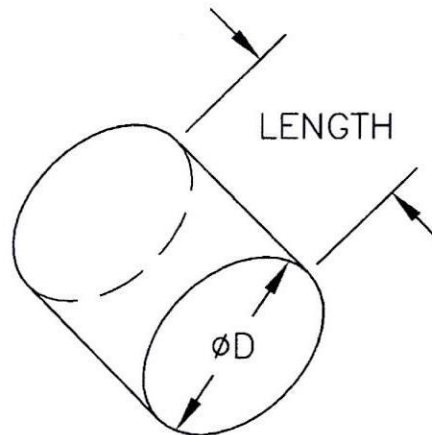
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
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Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							



DESIGN <i>P/H</i>	DRAWN BY <i>P/H</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6103	Rev. B SHEET 1 OF 1
DATE 06.01.31		TITLE ROUND BILLET, ALUMINUM	SCALE NTS
A	01.04.10	NEW ISSUE	
B	06.01.31	ADD D6103-003	

SPECIFICATION CONTROL DRAWING

RELEASED
06.02.07 *[Signature]*



WLO 150622

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	D (Diameter)	Length
D6103-001	7075-T6/T651 (QQ-A-200/11 OR QQ-A-225/9)	Ø3.250	12.50
D6103-003	7075-T7351 (QQ-A-225/9)	Ø3.500	12.50

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D6103-003

B150622

D6103-003

B150622

D6103-003

B150622

D6103-003

B150622

D6103-003

B150622

D6103-003

B150622

D6104-005

B150622

D6104-005

B150622

D6103-003

B150622

D6103-003

B150622

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B150622

D6103-003

B150622

D6103-003

B150622

D6103-003

B150622

D6104-005

B150622

D6104-005

B150622

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3066146

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 01-SEP-16	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 3066146-2	

Shipment Details	Final Destination Branch - TOR
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Order No 4480264	Line No 2	Item No 8808.MO	Description 3.5000..RD.7075.T7351.ALUMINUM.CF.144.0000 CUT TO 12.5 IN (+ .1250/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: AMS-QQ-A-225/9 ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com				
Purchase Order No 33493		Part Number YOUR ITEM NUMBER: D6103-003		Ordered Qty 6.00 PCS		Invoice Qty 6.00 PCS	
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS Spl 6 9-6.					
Delivery No. 120527529	Mill KAISER ALUMINUM	Heat Number 	Mech Id	PCS 6	Width (IN)	Length (IN)	Shipped Qty(LBS) 72.7522

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Date Printed: 01-SEP-2016 05:16:47 PM



Castle Metals®

A. M. Castle & Co.

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CERTIFICATE OF CONFORMANCE

Page 2 of 2

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Name:

Chris Galt

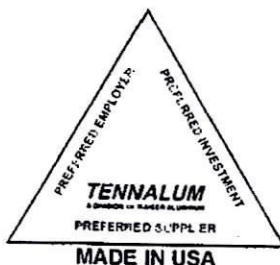
SEP 01 2016



SP16-9-6.

KAISER ALUMINUM FABRICATED PRODUCTS

Tennalum
309 Industrial Drive
Jackson, TN 38301
731-423-2811



CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

CUSTOMER PO NUMBER: 354591-1		CUSTOMER PART NUMBER: 8808		PRODUCT DESCRIPTION: Cold Finished Round	
KAISER ORDER NUMBER: 706985	LINE ITEM: 1	SHIP DATE: 10/19/2015	ALLOY: 7075	TEMPER: T7351	
WEIGHT SHIPPED: 2106 lbs.	QUANTITY: 15 pcs.	B/L NUMBER: 38847	DIAM/DAE/THKNS: 3.500 in.	WIDTH: 0.000 in.	LENGTH: 144.0 in.
SHIP TO: A M Castle & Co 26800 Miles Road Bedford Heights, OH 44146 USA			SOLD TO: A M Castle & Co 1420 Kensington Road Suite 220 Oak Brook, IL 60523 USA		

Test Code: 1000 AC

Actual Physical Properties

Lot Number	LONG. UTS ksi	LONG. YTS ksi	LONG. ELONG. %	COND % IACS
20195799	70.6	59.5	14.5	39.0
20196427	70.8	59.2	16.0	39.4
20197461	70.0	58.0	15.5	39.9

DAS
14
9-39

16/09/08

Chemical Composition, WT. % (Aluminum Remainder)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHERS EACH	OTHERS TOTAL	Lot
Actual	0.13	0.28	1.4	0.03	2.7	0.19	5.8	0.03			20195799
Actual	0.10	0.23	1.4	0.02	2.7	0.19	5.9	0.03			20196427
Actual	0.12	0.23	1.4	0.02	2.6	0.19	5.8	0.03			20197461
Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	
Min			1.2		2.1	0.18	5.1				

Specifications

Standard: ISO 9001, ASTM B211-12, AMS 4124E, AMS-QQ-A-225/9A Non-Standard: A97075_11_R14

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgment form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

Plant Serial: 22220

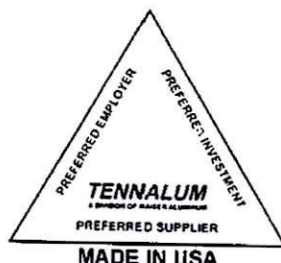
Kaiser Order Number: 706985

Line Item: 1

KAISER ALUMINUM

FABRICATED PRODUCTS

Tennalum
309 Industrial Drive
Jackson, TN 38301
731-423-2811



CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Miscellaneous Notes

Made in USA

This material was melted and manufactured in the USA. Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. AS9100C:2009 The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

This material meets the requirements of (cold finished) T73 temper and QQ-A-225/9E (CANCELLED). NAFTA - YES. Material complies with FAR BAA (FAR 52.225-1, Buy American Act-Supplies), DFARS BAA (DFARS 252.225-7001 Buy American Act & Bal of Payments Prog), and FAR TAA (FAR 52.225-5 Trade Agreements). No weld repair. This material is RoHS 2 - 2011/65/EU compliant.

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

Plant Serial: 222202

Kaiser Order Number: 706985

Line Item: 1



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO33493**

Purchase Order Date 8/31/2016

PO Print Date 8/31/2016

Page Number 2 of 3

Order From :
METAUX CASTLE
P.O. BOX 4090 STN A
TORONTO, ONTARIO M5W OE9
CANADA

VU-MET002

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via: Yours ppd

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

Line Total: \$520.00

3 D6103-003P ✓ Round Alum Billet ✓ 9/16/2016
Yes
9/16/2016

10.00
Each

\$36.30 \$363.00

AS PER DWG D6103 REV. B
B150622
MATERIAL: 7075-T7351 AS PER QQ-A-225/9
SIZE: 3.500" X 12.500" LONG

Sp/6 9-6

Line Total: \$363.00

4 D6104-005P 17-4 SS Roundbar 4.00"Od 9/16/2016
Yes
9/16/2016

10.00
Each

\$54.20 \$542.00

AS PER DWG D6104 REV. B
B150729
MATERIAL: 17-4 PH AS PER AMS 4643 OR AISI 630
SIZE: 4.00" X 5.10" LONG

Line Total: \$542.00

Note:

8/31/2016

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3066200

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 01-SEP-16	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 3066200-2	

Shipment Details	Final Destination Branch - TOR
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Order No 4480264	Line No 1	Item No 8808.MO	Description 3.5000..RD.7075.T7351.ALUMINUM.CF.144.0000 CUT TO 12.5 IN (+ .1250/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: AMS-QQ-A-225/9 ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@dartaero.com
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Purchase Order No 33493	Part Number YOUR ITEM NUMBER: D6103-003	Ordered Qty 4.00 PCS	Invoice Qty 4.00 PCS
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Details	ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS
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Delivery No. 120527528	Mill KAISER ALUMINUM	Heat Number 	Mech Id	PCS 4	Width (IN)	Length (IN)	Shipped Qty(LBS) 48.5015
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A. M. Castle & Co.

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Page 2 of 2

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Name:

Chris Galt

SEP 01 2016



Sp/6 9-6.

KAISER ALUMINUM

FABRICATED PRODUCTS

Tennalum
309 Industrial Drive
Jackson, TN 38301
731-423-2811



CERTIFIED TEST REPORT
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Castle Metals FP
HEAT NUMBER 20189333
MECHANICAL ID _____
ITEM CODE 8808
LOT NUMBER _____
PO NUMBER 310060
RECEIPT DATE 11-6-14
SUPPLIER Kaiser
SPECIFICATION _____
LCS P
COMMENT _____
APPROVED [Signature]

CERTIFICATION

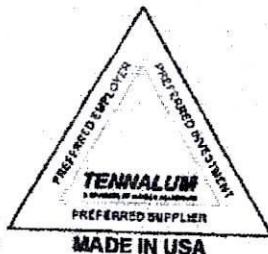
Kaiser Aluminum Fabricated Products, LLC ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

[Signature]

KAISER ALUMINUM FABRICATED PRODUCTS

Tennalum
309 Industrial Drive
Jackson, TN 38301
731-423-2811



CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

CUSTOMER PO NUMBER 310060-1		CUSTOMER PART NUMBER 8808		PRODUCT DESCRIPTION Cold Finished Round		
KAISER ORDER NUMBER 700732	LINE ITEM 1	SHIP DATE 11/03/2014	ALLOY 7075	TEMPER T7351		
WEIGHT SHIPPED 4222 lbs	QUANTITY 30 pcs.	B/L NUMBER 37520	DIAM/BAF/THKNS 3.500 in.	WIDTH 0.000 in.	LENGTH 144.0 in	
SHIP TO A M Castle & Co 3400 No. Wolf Road Franklin Park, IL 60131 USA			SOLD TO A M Castle & Co 1420 Kensington Road Suite 220 Oak Brook, IL 60523 USA			

Test Code: 1000 AC

Actual Physical Properties

Lot Number	LONG. UTS ksi	LONG. YTS ksi	LONG. ELONG. %	COND % IACS	DAS 14 9-89
20189333	70.8	59.3	15.0	39.3	16/09/08

Chemical Composition, WT. % (Aluminum Remainder)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHERS EACH	OTHERS TOTAL	Lot
Actual	0.13	0.29	1.4	0.04	2.8	0.19	5.8	0.03			20189333
Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	
Min			1.2		2.1	0.18	5.1				

Specifications

Standard: ISO 9001, ASTM B211-12, AMS 4124E, AMS-QQ-A-225/9A Non-Standard: A97075-11-R13

CERTIFICATION

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John Hennekamp, Quality Manager

John Hennekamp

Plant Serial: 209932

Kaiser Order Number: 700732

Line Item: 1

MATERIAL RECEIPT INSPECTION FORM

PO / BATCH NO 33493/150622

MATERIAL DL103-003
DATE 16/09/08

MATERIAL CERTIFIED yes
QUANTITY RECEIVED 10
QUANTITY INSPECTED 10
QUANTITY REJECTED _____

THICKNESS ORDERED 3.500
THICKNESS RECEIVED 3.500
SHEET SIZE ORDERED _____
SHEET SIZE RECEIVED _____

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒ N ☐	
CORRECT FINISH	Y ☒ N ☐	
CORROSION	Y ☒ N ☐	
CORRECT GRAIN DIRECTION	Y ☒ N ☐	
CORRECT MATERIAL	Y ☒ N ☐	<u>7075T7351</u>
CORRECT THICKNESS	Y ☒ N ☐	<u>3.500</u>
PHOTO REQUIRED	Y ☒ N ☐	
CORRECT MATERIAL	Y ☒ N ☐	
CORRECT REF # TO LINK CERT	Y ☒ N ☐	<u>HEAT# 20197461 20189333</u>
CORRECT MATERIAL IDENTIFICATION	Y ☒ N ☐	<u>DL103-003</u>
CORRECT M# ON THE MATERIAL	Y ☒ N ☐	<u>B150622</u>
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☐ N ☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☐ N ☒	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION **ENGINEERING SIGNOFF (if required)**

INSPECTED BY 14
9-89

DATE 16/09/08

SIGNED OFF BY _____
DATE _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

1. VERIFY STOCK TO DART PURCHASE ORDER
2. MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 - a. WIDTH THICKNESS DIAMETER WALL THICKNESS & LENGTH
3. VERIFY CONDITION OF MATERIAL i.e. DAMAGED CORRODED ETC
4. VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
5. VERIFY MATERIAL CERTS ARE CORRECT TO THE DART PO INSTRUCTIONS
6. REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

1. VERIFY TO DART SUPPLIED DRAWING
 2. SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
 3. USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
 4. VERIFY THAT MATERIAL CERTS MATCH TO WHATS CALLED UP ON THE DART DRAWING
- AFTER MATERIAL PASSES INSPECTION**
5. HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN 20pcs FOR FULL INSPECTION
 6. INSPECT ALL DIMS AS PER DRAWING REQUIREMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

1. VERIFY MATERIAL CERTS MATCH THE REQUIREMENTS ON THE DART DRAWINGS
2. INSPECT MIN HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
3. INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 - a. WALL THICKNESS USING ULTRA-SONIC IN 4 LOCATIONS
 - b. OUTSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - d. STRAIGHTNESS @ CENTER OVER 12" SPAN
 - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
4. IDENTIFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1 TUBE2) AND W/O# AND PO#
5. RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE OC COORDINATOR BEFORE GOING FURTHER